particles in the cellularized interconnective tissue and a matrix positive to alcian blue coloration (FIG. **20**B).

[0391] The myofibrogenic differentiation medium allowed the formation of 3D structures. The structure formed were grippable, but fragile. Again, histological analysis revealed integration of particles in the cellularized interconnective tissue and α-SMA positive staining of the matrix (FIG. **20**C).

[0392] ASCs and particles in keratinogenic medium formed a large, plane and thin 3D structure. This latest was very fragile and difficult to handle (FIG. **20**D).

[0393] (Table 6).

TABLE 6

Characteristics of the structures formed in the differentiation media tested

Differentiation medium	3D structure	Grippable	Solidity	Interconnective tissue
Osteogenic	+	+	+/−	+
Chondrogenic	+	+	+	+
Myofibrogenic	+	+/−	+/−	+
Keratinogenic	+	+/−	−	+

[0394] Therefore, a 3D structure was observed in all the samples of biomaterial formed with ASCs and gelatin, with all the differentiation media tested.

1. A biomaterial having a multi-dimensional structure comprising differentiated adipose-derived stem cells (ASCs), an extracellular matrix and gelatin.

2. The biomaterial according to claim **1**, wherein said gelatin is porcine gelatin.

3. The biomaterial according to claim **1**, wherein said gelatin is in the form of particles.

4. The biomaterial according to claim **3**, wherein said particles have a mean diameter ranging from about 50 μm to about 1000 μm,

have a mean diameter ranging from about 75 μm to about 750 μm, or

have a mean diameter ranging from about 100 μm to about 500 μm.

5. The biomaterial according to claim **1**, wherein said biomaterial is three-dimensional.

6. The biomaterial according to claim **1**, wherein said ASCs are differentiated into cells selected from the group consisting of osteoblasts, chondrocytes, keratinocytes, myofibroblasts, endothelial cells and adipocytes.

7. (canceled)

8. A method for producing a biomaterial having a multi-dimensional structure comprising differentiated adipose-derived stem cells (ASCs), an extracellular matrix and gelatin comprising the steps of:

adipose-derived stem cells (ASCs) proliferation,

ASCs differentiation at the fourth passage, and

multi-dimensional induction, optionally three-dimensional induction.

9. A multi-dimensional biomaterial obtainable by the method according to claim **8**.

10. (canceled)

11. The method according to claim **16**, wherein said tissue is selected from the group consisting of bone, cartilage, dermis, muscle, endothelium and adipose tissue.

12. The method according to claim **16**, wherein said tissue defect is a dermis defect.

13. The method according to claim **16**, wherein said biomaterial is for use for dermis reconstruction.

14. The method according to claim **16**, wherein said biomaterial is for use for treating a dermis wound, optionally a diabetic dermis wound.

15. The method according to claim **16**, wherein said biomaterial is for use for treating epidermolysis bullosa, giant congenital nevi, and/or aplasia cutis congenita.

16. A method for treating a tissue defect in a subject in need thereof, comprising administering to said subject a biomaterial having a multi-dimensional structure comprising differentiated adipose-derived stem cells (ASCs), an extracellular matrix and gelatin.

17. The method according to claim **16**, wherein said gelatin is porcine gelatin.

18. The method according to claim **16**, wherein said gelatin is in the form of particles.

19. The method according to claim **16**, wherein said biomaterial is three-dimensional.

20. The method according to claim **16**, wherein said ASCs are differentiated into cells selected from the group consisting of osteoblasts, chondrocytes, keratinocytes, myofibroblasts, endothelial cells and adipocytes.

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